REMARKS

New claim 26 has been added. Claim 21 has been amended. No new matter has been added.

Claims 13 to 26 are pending now in the present application. Applicants respectfully request reconsideration of the present application in view of this response.

Applicants thank the Examiner for pointing out Applicants' typographical error in claim 21. Claim 21 has been amended above, and no new matter has been added. Support for the amendment can be found in the Specification of record.

Claims 13 to 15, 17, 18, 20, and 25 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 5,311,346 to Haas, et al. ("Haas reference") in view of The Robinson reference or the Favin reference or the Cao reference.

The Haas reference purportedly concerns reducing the polarization-dependent distortion of an optical signal transmitted through an optical fiber by aligning the polarization of the optical signal to minimize the received signal distortion. The reference further recites that a polarization controller may be located at either the input or output end of a long haul optical fiber system and is used to align the polarization of the signal to minimized the received signal distortion.

The Robinson reference purportedly concerns a method and apparatus for performing fault management in an optical communications system including a PMD compensator, and using a controller receiving notifications indicative of PMD in the system, as well as at least one indicator from a system device providing an indication of an attribute of the communication system. The method refers to providing fault management by correlating the PMD notifications and system indicators to distinguish between fiber failure, PMD-related degradations, and failure of monitoring equipment itself.

The cited Haas and Robinson references do not teach or suggest all of the features of the present claims. Specifically, claim 13 of the present invention concerns a method for reducing distortion of an optical pulse contained in a communication-transmitting luminous flux in an optical communication system caused by polarization mode dispersion. Claim 13 requires, among other features, using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system. Neither the Haas and Robinson references appear to have this feature. In contrast, the Robinson reference recites correlating its PMD notifications and

system indicators to distinguish between fiber failure, degradations and monitoring equipment failures.

The Cao reference purportedly describes a PMD compensator for compensating for PMC in an optical signal by an automatic tracking of a principal state of polarization. The Cao reference refers to a feedback control signal, and a compensation control arrangement responsive to the optical signal and the polarized components, but does not appear to teach or describe using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system, as required by claim 13.

The Favin reference also does not cure the deficiencies of the Haas reference. Specifically, the Favin reference purportedly describes a polarization dependent loss (PDL) of an optical component which is computed in a deterministic method that requires "only four measurements" each having a unique input state of polarization. While the Favin reference does discuss computing a PDL, the Favin reference does so in a "deterministic method that requires only four measurements" and does not appear to teach or describe using a small, coupled-out portion of the communication-transmitting luminous flux to determine the transmission quality of the optical communication system, as required by claim 13.

Accordingly, Applicants respectfully submit that the Haas and Robinson or Favin or Cao references, alone and in combination, do not teach or suggest all of the features of claim 13. Claims 14, 15, and 25 depend from claim 13 and are allowable for the same reasons. Claim 17 and thus its dependent claims 18 and 20, recite features analogous to claim 13, and are therefore allowable for essentially the same reasons as claim 13.

Accordingly, Applicants respectfully submit that claims 13 to 15, 17, 18, 20, and 25, are allowable over the cited references. Withdrawal of the rejection under 35 U.S.C. § 103(a) of claims 13 to 15, 17, 18, 20 and 25 is respectfully requested.

Claims 16, 19, and 21 to 24 were rejected under 35 U.S.C. § 103(a) as unpatentable over the Haas reference in view of the Robinson reference or the Favin reference or the Cao reference and further in view of the Wiech 1998 article concerning polarization extinction.

Claims 16, 19, and 21 to 24 depend from one of the claims discussed above and are allowable over the Haas reference in combination with each of the Robinson reference, the Favin reference, and the Cao reference. Further, the Wiech 1998 article does not cure the deficiencies of any of those references. Specifically, the Wiech 1998 article appears to concern an optical signal to noise ratio measurement in WDM networks using polarization extinction. At the Patent Office's marked section, the Wiech reference discusses that a state

of polarization of the incoming WDM signal is changed by means of the polarization controller until the optical spectrum analyzer or the power meter indicates minimum power in the channel under investigation. Then, in that case, the polarization controller is set to the orthogonal state. The displayed power is maximum and corresponds, in the case of sufficiently high OSNR, to the signal power. Using these values, the ONSR is calculated. In contrast, claim 13 involves using a small, coupled-out portion of the communication-transmitting luminous flux – not the measurement of displayed power at maximum and minimum states in the channel as in the Wiech reference -- to determine the transmission quality of the optical communication system. Accordingly, when taken in combination with the Haas reference and one of the Robinson, Cao, and Favin references, the Wiech reference still does not cure the deficiencies. Claim 13 is believed allowable, and thus its dependent claim 16 is allowable for at least the same reasons. Claims 19 and 21 to 24 depend from claim 17 which recites features analogous to those described above of claim 13, and are allowable for essentially the same reasons. Withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) is respectfully requested.

New claim 26 depends ultimately from claim 17 and is also allowable for essentially the same reasons as claim 13.

CONCLUSION

In view of the foregoing, it is believed that claims 13 to 26 are now allowable, and that the outstanding rejections of those claims have been overcome.

It is therefore respectfully requested that the present application issue.

Respectfully submitted,

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By: /Linda Lecomte/

Linda Shudy Lecomte (Reg. No. 47,084)
KENYON & KENYON LLP
One Broadway
New York, New York 10004
(212) 425-7200 (telephone)
(212) 425-5288 (facsimile)

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